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ABSTRACT OF THE DISCLOSURE

A method of fabricating a damascene structure comprises of forming a dielectric layer on a substrate, and an opening is formed on the dielectric layer to expose a portion of the substrate. The dielectric layer is thus defined. A barrier layer is formed conformal to the profile of the opening and a metal layer fills the opening. Two chemical mechanical polishing processes are carried out sequentially to polish the metal layer and the barrier layer, wherein a first slurry is used to polish the metal layer and a second slurry that contains oxidant is used to polish the barrier layer. A damascene structure is thus formed.

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100